# HIGH SCHOOL TO COLLEGE TRANSITION:

# A MIXED METHODS APPROACH TO IMPROVE STUDENT UNDERSTANDING

# OF COLLEGE READINESS

A Record of Study

by

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# ABSTRACT

This study evaluated the effectiveness of a college-themed, inquiry-based curricular intervention on student perceptions of college readiness among high school students in a Freshman English Language Arts class who had been classified by school personnel as at-risk of graduating from high school. A mixed methods approach was selected as a means of capturing student college-going narratives that emerged from qualitative and quantitative pre-and post-intervention data. This study builds on prior research on perceptions of college readiness. Twenty high school freshmen in an at-risk English I class took a pre-intervention survey of their perceptions of college readiness. Following a college-themed curricular intervention, students completed a post-intervention survey on their perceptions of college readiness. Individual student narratives were collected from six students after the intervention. Quantitative data from pre-and post-intervention surveys were analyzed using a paired t-test. Personal interview data were recorded into thought segments, coded, and analyzed for trends. Analyzing both qualitative and quantitative data showed a change in student perceptions of college readiness following curricular intervention. Results from the study could shape future instructional intervention as part of high school-based comprehensive college readiness programs.

# DEDICATION

I dedicate this paper to the mentors who inspired me to devote my career to students but who cannot be here today to see me fulfill my goal:

To my former co-worker Dr. Shelly Childers. Shelly had a way of making people feel valued, and Shelly's encouraging words inspired me to pursue my doctorate.

To my former supervisor Dr. Peggy Elder. Peggy had no idea that her work in higher education administration in Seattle, Washington, would inspire me many years later. I owe much of my belief in the ability of students to achieve their college-going goals to Dr. Elder.

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## Contributors

This work was supervised by a record of study (ROS) committee consisting of co-chairs Dr. Patrick Slattery [Chair] and Dr. James Laub [Co-Chair] of the Department of Teaching, Learning, and Culture at Texas A&M. Committee members included Dr. Jacqueline Stillisano, a director in the Department of Teaching, Learning, and Culture and Dr. Helen Muyia, Clinical Associate Professor of Educational Administration and Human Resource Development.

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# NOMENCLATURE

| | |
|---|---|
| CCRS | College and Career Readiness Standards |
| CE9 | ELA class section specifically for students who failed 8th-grade STAAR reading test |
| ELA | English/Language Arts |
| EOC | End of Course exam |
| STAAR | State of Texas Assessment of Academic Readiness |
| TEA | Texas Education Agency |
| THECB | Texas High Education Coordinating Board |

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# CHAPTER I

# INTRODUCTION

As educators, we must prepare students for the 21st-century workforce. This expectation means many students will need to pursue a college education (Katz, 2007). As a consequence, students must learn how to prepare for college. Maruyama (2012) described college readiness as the "accumulation of knowledge and experiences that prepare students for college" (p. 253). Conley (2007; 2010) described college readiness as the academic and non-academic factors that may influence successful completion of college-level coursework.

Students who do not come from a college-going culture have varying perceptions of post-secondary educational needs. Unfortunately, many high school students do not know what it means to be "college ready" (Conley, 2007; 2010). Therefore, what Conley and others call *college knowledge* should be presented to students both in and out of the classroom. Policies and programs already exist at the state and national level for college readiness. However, more can be done to bring college knowledge to the classroom and to the students who need to hear about what it takes to go to college: at-risk students.

## The Problem Space

### National Perspective

At a national level, policies and programs like Elementary and Secondary Education Act (ESSA), Race to the Top, and Common Core call for schools to provide college readiness opportunities to students. Consider these words from former President Barack Obama to a joint session of Congress in 2009:

> "…tonight I ask every American to commit to at least one year or more of higher education or career training. This can be community college, a four-year school, vocational training, or an apprenticeship. But whatever the training may be, every American will need to get more than a high school diploma" (*Pathways to Prosperity*, 2010, p. 6).

Obama's remarks reflect growing national sentiment that a high school diploma does not represent the final step in a student's educational journey. Obama's words to the nation echo what others have also reported: The ability to have a role in the 21st-century workplace means the students in our classrooms today need education beyond high school (Dyce, Albold, & Long, 2013). A 2008 report by the Bureau of Labor Statistics states that "all of the 71 jobs projected to grow by 20 percent or more require some college, with most requiring one or more college degrees (Wyley, Wyatt, & Camara, 2010). While education beyond high school remains a primary goal, in reality, a recent report from the Department of Education claims that the United States lags behind other countries in college degree attainment (International educational attainment, 2017).

**State Perspective**

According to a report published by the Texas Higher Education Coordinating Board (THECB) (2011), Texas was the first state to develop curricular standards for college readiness. College Career Readiness Standards (CCRS) provide a curricular framework for students to develop skills students needed to be successful with entry-level college courses or skilled workforce opportunities. CCRS align with Texas

Essential Knowledge and Skills (TEKS) to provide an academic framework for students in English and Math. CCRS should result in student success in college. Strategic policy initiatives like *Closing the Gaps 2000* and *60x30TX* from the THECB proclaim the need for Texas students to pursue post-secondary education and training. For example, *60x30TX*, also published by the Texas Higher Education Coordinating Board (2015), calls for at least 60% of Texans aged 25-34 to have a certificate or degree by 2030. However, Dr. Raymund A. Paredes, Texas Commissioner of Higher Education, reported that four in ten recent high school graduates in Texas do not go to college (Gewertz, 2009), despite legislation in the state of Texas requiring students to formulate and execute college-going plans (*Texas Higher Education Coordinating Board* 2000).

Additionally, Texas House Bill 5 (HB5) legislation[1] calls for eighth graders to create a four-year academic plan that leads to a career pathway. Specifically, 33 Texas Education Code § 33.007 states that, starting in the 2014-2015 school year, elementary, middle/junior high, and high school counselors will be required to advise students and parents annually of the importance of postsecondary education. The implementation of HB5 burdens schools with many problems, hence, the significance of this study of how to provide opportunities for students to learn about their college-going options.

Two web sites sponsored by THECB, College for All Texans and College Readiness Assignments for Texas, provide students with information about setting and

[1] S.B. No. 715, Acts of Texas Legislature 83rd Regular Session 2013 amends: Tex. Educ. Code § 33.002.

achieving college-readiness goals.

**College for All Texans.** The College for All Texans web site contains information about college-going opportunities for students, military, and adult learners. The site includes information on how to choose a college and how to apply to college. Students can discover the net price of attending college and take virtual tours of a college campus.

**College Readiness Assignments for Texas (CRAfT).** Created by The University of Texas at Austin in conjunction with THECB, CRAfT provides a web-based college readiness tool for students and teachers ("College Readiness Assignments for Texas," 2017). Students can access lessons based on CCRS. Additionally, students can access cross-curricular lessons including how to read a textbook and how to plan for college. The unit on planning for college talks specifically about developing SMART goals (specific, measurable, achievable, relevant, and time-bound). Teachers can use CRAfT to customize assignments for students based on their college-going needs.

Despite policy and program efforts at the state and federal level, I have discovered from my work with high school students that most students have little or no correct information about what it takes to apply to and succeed in postsecondary education and training programs. Just because federal and state officials mandate college readiness in our schools does not mean it will happen at the local level. Students need intentional college readiness instruction at the classroom level.

## The Problem of Practice

### Context

The research site exemplifies a comprehensive high school in a suburban city southeast of Houston, Texas. This school exists within part of one of the largest school districts in Texas. The district formed in 1948 when existing local schools in Webster, Seabrook, Kemah, and League City, Texas, merged to become one district (Cherry, 2011). A growing space industry supported by NASA and Aerospace leaders The Boeing Company and Lockheed Martin brought economic prosperity to the Bay Area in the early 1960s, and the district grew along with it (Cherry, 2011). Now with over 40,000 students in Pre-Kindergarten through twelfth grade, the district has five comprehensive high schools serving ninth through twelfth grade, two alternative high schools, and one early-college high school (TEA, 2015). Each comprehensive high school has its own specialized vocational program including culinary arts, dental hygiene, cosmetology, and automotive repair.

Known as the first high school in the district, the research site's current enrollment of just over 2300 students makes it the smallest of the five comprehensive high schools in the district (L. Gaffey, personal communication, September 12, 2016). The current site first opened its doors in 1957 through a consolidation of area high schools (Cherry, 2011). United States Census data from 2015 estimated the total population of the city at 98,312. Of this number, 79.5% represent white majority citizens and 41.2% possess at least a Bachelor's degree. Census data also report median income at $90,972 (United States Census Bureau, 2015). The city of League City has

experienced a 17.7% population increase from 2010 to 2015, and district officials expect both the site and district to grow in the years to come because of an increased business presence (L.Gaffey, personal communication, September 12, 2016).

Data from the Texas Education Agency 2016 Accountability Summary for the research site classifies 23.4% of the school's students as economically disadvantaged, 3.6% as English language learners, and 9.6% as recipients of Special Education services (TEA, 2016). The summary also reports that although the school met standards on student achievement, student progress, closing performance gaps, and postsecondary readiness, the school did not surpass standards to receive greater recognition or distinction (TEA, 2016).

District and campus administrators believe student success comes through personalized learning. The motto, "Any time, any place, any pace" captures the district's commitment to student-directed learning. The school principal believes students can direct their learning, and the high school should be the place where students take ownership of their learning (J. Majewski, personal communication, September 13, 2016). Campus leaders acknowledge this situation represents a transitional phase from teacher-directed learning, but they strongly believe student choice will lead to student educational success.

A 6A school in the Texas University Interscholastic League (UIL), the research site boasts recent district championships in several men and women's sports. Additionally, students at the research site excel in fine arts, forensics, robotics, and journalism extracurricular competitions. School pride exists as an important element at

the school, and school administrators want students to be as successful in the classroom as in extracurricular activities.

**Initial Understanding**

In Fall 2015 and Spring 2016, I completed two internships at the research site where I studied the topic of college readiness. From semi-structured interviews with faculty and staff, I learned that students have varying perceptions of readiness for post-secondary education. Conversations with school administrators and guidance counselors suggested that as the school population has grown and diversified, the percentage of students indicating they feel ready to attend either a community college or a four-year college after high school graduation has dropped. Many of the campus staff believe students need more information in high school about going to college. Helping students transition from high school to college will have wide-reaching social and economic benefits for all stakeholders.

In 2016, the research site identified high student failure rates as a problem of practice. School leaders stated they cared as much for motivational gaps as they did instructional gaps. Currently, instructional efforts ensure the effectiveness of first-time instruction with a goal of improving student learning outcomes. However, students still fail courses, and the school's STAAR passing rates lag among other high schools in the district. Campus leaders believe that talking to students about their college and career potential might incentivize these students need to succeed in high school. However, the school lacks instructional and motivational support for the marginalized student to have access to information about attending college. School administrators anticipate that my

research will yield high-interest, high-engagement instructional supplement for at risk students. The hope rests on the desire to reduce student failure rates by helping students see the value of secondary education.

As I began to frame my Record of Study problem space, I wanted to know if students at the research site understood what it meant to be college and career ready. Particularly among students who had experienced academic failure, I wanted to know if providing college and career readiness interventions to marginalized students would change perceptions of readiness. This led me to look specifically at CE9[2] students and Credit Recovery[3] students.

**Relevant History of the Problem**

At the research site, college talk consists of a college-themed week in the fall and various after-school/evening workshops that students and parents can attend. Currently the district develops college-themed events including financial aid information nights. However, these events, held at a location central to all students and parents in the district, often prove difficult for some parents to reach. Currently, little evidence suggests the existence of classroom-based instruction on college readiness or professional development for teachers on how to speak about college with students.

In an ideal situation, students would have access to college readiness education programs as soon as they enter high school. Education programs would target all

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[2] CE9 English class targets incoming freshmen who failed the previous year's STAAR test in reading.
[3] Credit Recovery is a computer-based course for students who previously failed a course and need course credit for graduation.

students, not just those on a college-going trajectory. In particular, education programs targeting students who have been deemed "non college-ready" would (1) help all students see themselves as college capable, (2) prepare students for both the academic and non-academic realities of college, and (3) encourage better performance in high school to achieve college acceptance. Getting college knowledge aligns with district personalized learning goals by becoming a student-choice, teacher-facilitated inquiry-learning project.

**Stakeholder Groups and Values**

Students are not the only stakeholders in this study; teachers and campus administrators need information generated by this study to revisit and revise current college-readiness practices. This project has the potential to influence students' knowledge about their college-going options. Also, teachers need to understand the power of their roles as encouragers and facilitators of college-readiness. Finally, the impact of this project has implications for other high schools with similar challenges.

I identified potential stakeholders as the CE9 course teacher, Credit Recovery course teacher, the dean of instruction, and the school principal**.** Discussions with stakeholders originated in spring of 2016 and continued in fall with the school Problem of Practice committee, including the dean of instruction and the school principal. Values emerging from these conversations were mostly professional values and social and political values, although several conversants discussed organizational values and basic human values of survival.

Initial discussions centered on professional values, specifically noting an increase of students failing content-area classes. Looking at student perceptions of college and

career readiness in high school meant focusing on the social and political value of fairness. The dean of instruction stated that we needed to do more for these students. The school principal demonstrated professional values when he talked about college and career readiness being a state mandate. He used the words "obligation" and "responsibility" several times. This demonstrates the school principal's commitment to stakeholders at every level of education.

I also talked to the teacher of the Credit Recovery class and a freshman English teacher who teaches an ELA class for students who have previously failed one or more STAAR tests. Both of these teachers describe themselves as wanting the best for students. One comment, "Nobody talks to these kids about colleges and careers" struck me in particular as a social and political value. All students should be guided to not just graduate from high school but have a college and career readiness plan in accordance with state law and federal policy.

As I expected, all four conversants discussed social and political values. Teachers who work mainly with marginalized students should value courage, fairness, and individualism. However, most of the comments in these conversations focused on a school's obligation to students and the organization. Sound judgment should guide education reform, and education transformation should be guided by making the right choices for students and stakeholders. Table 1 summarizes conversations from stakeholders.

*Table 1*

*Rank-Ordered Table of Values, Conversants, and Illustrative Statements*

| Rank | Category and value | *Conversant | Illustrative statement |
|---|---|---|---|
| 1 | Professional Value: Obligation to Clients | DOI | "Our Credit Recovery class students just sit there after finishing their modules. Most of them are on their phones until the end of the semester. They get their credits done in about 6 to 9 weeks, and then they have the rest of the semester to do nothing. We need to do something more for these kids." |
| 2 | Professional Value: Obligation to organization | SP | "College and career readiness is a state mandate. Our stakeholders expect that we are helping all our students with college and career goals. It is our obligation." |
| 3 | Social and Political Value: Courage | CR | "Our school has the responsibility to provide encouragement to students who have failed a subject. We may be the only ones who ever talk to these kids about college and career possibilities." |
| 4 | Social and Political Value: Fairness | CR | "Nobody talks to these kids about colleges and careers." |
| 5 | Social and Political Value: Individualism | CE | "I would love to have the chance to work with my students on college and career readiness." |
| 6 | Organizational Value: Efficiency | DOI | Working with CE 9 classes "has the greatest level of success and making a difference." |
| 7 | Organizational Value: Efficiency | DOI | "The structure of the Credit Recovery class makes it easy to access these students. The CE 9 classes make it easy to work with these kids too." |
| 8 | Basic Human Value: Survival | DOI | "By the time our Credit Recovery students get to be seniors, they have all but given up on school. They just want out." |

Table 1 continued

Notes: Conversants

SP – School Principal
DOI – Dean of Instruction
CR – Credit Recovery class teacher
CE – CE9 ELA teacher

### Alternative Viewpoints

My earliest conversations at the research site began when I first started teaching at the school in 2015. Knowing I was working on a doctoral degree, school administrators looked for problem spaces aligned with my interest in college readiness. Conversations with the school principal guided me to focus on the school's mission to create an educational setting where students can explore college options. However, not all school personnel share the belief that every student can be college ready. The school principal's input encouraged me to consider counter-arguments to college readiness. Based on these conversations, I determined the need to address college readiness in terms of the ability to complete education and training programs beyond successful completion of high school.

## Problem Statement

### Audience

The administrative team at the research site will receive the results of this study. The school principal and dean of instruction have authority to share research results with faculty and staff. Based on study outcomes, the school principal and dean of instruction

can request college-themed, inquiry-based curricular interventions be made available to all incoming freshmen as part of the English Language Arts class.

Students at the research site will benefit from a college-themed, inquiry-based curricular intervention because students will learn about what it means to be college-ready and the steps they can take to get there. By embedding college-readiness modules in a student's English class, students will have the support of a teacher trained to guide students through intervention. School administrators could potentially see decreased dropout rates as students develop a plan for high school and beyond. Other schools will benefit because interventions developed at the research site can be shared within the district and with other schools with similar beliefs. The community will benefit because students who believe they can attend college will hopefully become part of a more educated workforce.

**Ideal Scenario**

In *Closing the Gaps*, THECB (2000) called for more students to formulate and execute a plan to pursue post-secondary education and/or training. In an ideal situation, students would have access to college readiness education programs as soon as they enter high school. College readiness programs would target all students, not just those on a college-going trajectory. In particular, college readiness programs targeting students who have been deemed "non college-ready" would (1) help all students see themselves as college capable, (2) prepare students for both the academic and non-academic realities of college, and (3) encourage better performance in high school to achieve college

acceptance. Unfortunately, many students do not know what it means to be "college ready."

**Real Scenario**

In reality, over 10% of students at the research site come to high school having failed one or more STAAR tests in intermediate school. Students who have failed the ELA STAAR Reading and/or Writing test(s) in intermediate school enroll by counselor recommendation in a specialized CE9 ELA class with no more than 15 students. This allows for personalized instruction and support. After the STAAR ELA test in March, an opportunity exists to integrate college and career readiness instructional intervention. Working with students as early as their freshman year may change the college-going trajectory of these students. I believe these students would benefit from what Conley (2007) calls college knowledge. Helping students understand their college and career options may impact their success in high school as well because students can formulate achievable goals.

My field supervisor suggested working with students who had previously failed a STAAR test instead of upperclassmen who were enrolled in Credit Recovery classes. She felt underclassmen would be most likely to make good academic choices in high school once they saw themselves as college capable. I accepted her recommendation and revised my ROS proposal as necessary.

**Evolution of Current Understanding**

I recently accepted a half-time Instructional Coaching position at the research site in addition to a half-time teaching role. This has allowed me to participate in school-

wide problem of practice discussions. As such, I reframed the problem space to work specifically with students who have failed one or more STAAR/EOC test(s). These students enroll in CE9 ELA classes based on counselor recommendation. School administrators believe these students will benefit from an English class with fewer students and more targeted instruction than an on-level English class in the first year of high school. The decision to work with underclassmen in the CE9 class, instead of juniors and seniors in Credit Recovery, comes from input from stakeholders who felt like we had the greatest opportunity to impact student success by working with freshmen. The decision to work with high school freshmen aligns with research stating college discussions should take place early in a high school student's career (Gibbons, 2005; Gibbons & Borders, 2010; Castellano, Richardson, Sundell, & Stone, 2016; Baker, Foxx, Akcan-Aydin, Williams, Ashraf & Martinez, 2017).

**Reframed Problem**

Although it seemed right at the time to work with Credit Recovery students, the prevailing argument from campus leadership centered on the point that I needed to work with students who had time to develop a college-readiness mindset. The school principal encouraged me to look at the school and district vision of personalized learning, and the dean of instruction suggested working with underclassmen. These conversations led to reframing the problem space to target a younger population of students, namely high school freshmen. At this point, I developed the idea of implementing a college-themed, inquiry-based research project.

## Research Personnel

### Researcher Background

An educator by profession for nearly twenty-five years, I worked in higher education administration before getting my Masters degree in Teaching and Learning Studies. After completing alternative certification, I transitioned to teaching high school English. I have served in various leadership positions at the high school level, including working for six years as English Language Arts Department Chair. Currently employed by at the research site, I teach the AP Capstone Seminar class. Additionally, I serve as ELA Instructional Coach for four class periods a day. In this role, I provide job-embedded professional development to an ELA Department of 25 teachers and a campus faculty of 150 teachers.

I have long believed American school children have a unique opportunity to use education to cross socio-economic boundaries, and college can provide the means to do this. I initially cultivated an interest in college readiness from informal conversations with high school students about their college-going plans. From these conversations, I realized students had various levels of both information and misinformation about going to college. To address student needs for accurate college information, I developed a high school English Language Arts (ELA) elective class, College Bound 101, for prospective first-generation college students. I taught the class from 2005 to 2012 (when I relocated to Moscow, Russia). The course quickly became a popular class because of the nuts and bolts approach to helping students prepare for college.

Now that I teach at the research site, I bring my experience and passion for helping students with their college-going dreams to a school that does not have any outreach programs for students who may be labeled as non-college ready. I took what I developed at a previous high school and condensed it into a six assignment, college-themed research portfolio for Freshmen ELA students. I designed my Record of Study as a way to measure the impact of curricular intervention on student perceptions of college readiness. I hope to bring college knowledge to students at the research site who need it the most and to change the college-going trajectory of students who may not otherwise be college-bound.

As for the research aspect of my work, even though I am a high school teacher at the research site, I did not deliver the intervention. Instead, I partnered with a Freshman English teacher to train her to facilitate implementation. I based the curricular intervention on the college-themed research portfolio taught at the end of the freshman year of high school to address the required research ELA TEKS.

From my experience teaching high school students, I believe we can change the college-going trajectory of students who do not see themselves as college ready. Many schools have programs in place for advanced students to access college preparatory instruction through Advanced Placement (AP) classes, but at risk, marginalized student populations often receive little or no information on planning for college. Students who come to high school having already failed a STAAR test in intermediate school may not see themselves as capable of college-level work. Providing students an opportunity to learn about their college options as part of the CE9 ELA curriculum not only fulfills the

district vision of personalized learning, but it also potentially builds student motivation for success in high school and beyond.

### Field-Based Mentor

I identified the campus Dean of Instruction at the research site to serve as my field-based mentor. In addition to the day-to-day supervision of campus instruction, the dean oversees all instructional operations of the school, including teacher supervision, teacher professional development, and new course development. The dean has supervised the institutional direction for my research since I began working at the research site in 2015. The dean has given me the latitude to develop my ROS in whatever direction will be beneficial to both students and my research.

## Guiding Questions

The central question guiding this research addressed whether student perceptions of college readiness could be changed. Specifically, I wanted to know to what extent could a student's beliefs about his or her readiness for college could be improved using curricular intervention so that the student understands his or her college-going trajectory. Two additional questions came out of the central question: First, what areas of college readiness would likely keep a student from attending college, and second, does completion of a college-themed, inquiry-based curricular intervention change a student's perception of college readiness? Helping students see themselves as capable of attending and succeeding in college was the primary research goal.

## Research Questions

This study was designed to answer these specific questions in this order:

1. To what extent can a student's beliefs about his or her readiness for college be improved so that the student understands his or her college-going trajectory?
2. To what extent does completion of a college-themed, inquiry-based classroom intervention change a student's perception of college readiness?

## Terms

The following terms appear throughout this study:

At-risk: Students identified as at-risk may not graduate from high school because of previous academic performance, previous STAAR test results, or other non-academic circumstances that might keep students from completing high school (e.g. attendance issues).

CE9: Students enrolled in a CE9 class failed a previous year's STAAR test in the same content area. For example, students enrolled in a Freshman ELA 1 CE9 class either failed the 8th-grade STAAR reading test or failed both the previous year's ELA 1 STAAR test and the ELA 1 class.

College-themed, inquiry-based intervention: Freshman ELA students at the research site complete a college-themed unit of inquiry after the STAAR test in March. Students select a career and college to research. Teachers guide students through an inquiry proposal (what career and college to research) and a deliverable (what did the student discover).

College readiness: An over-arching term for the academic and non-academic factors necessary to complete a college course of study (ranging from an entry-level certificate to a four-year degree).

College-going trajectory: A term to describe a student's path from secondary to post-secondary education and training. Some students come to high school with college-going aspirations based on family support, school influence, or personal motivation.

Marginalized student: Brown (2006) states "marginalization consists in not taking others into account on any number of valued outcomes, resulting in powerlessness, ignorance, poverty, illness, insecurity, and other manifestations of devaluation" (p. 1). A marginalized high school student may encounter barriers to accessing information about postsecondary education and training opportunities.

Prospective first-generation college students: Students who have yet to enroll in college and have neither a parent nor a grandparent who attended college.

# CHAPTER II

# LITERATURE REVIEW

This chapter will present the conceptual framework that shaped this record of study. The next section presents the theoretical basis for the study, followed by relevant policy and program research findings in the field of college readiness.

## Conceptual Framework

Multiple worldviews guided this mixed methods project on marginalized students and their college knowledge (Conley, 2010). The study was shaped by post-positivist, pragmatic, and transformative worldviews (Creswell & Plano Clark, 2011; Creswell, 2014). As the project began with a quantitative survey, a post-positivist worldview initially informed the approach to research methods and data collection. The language used in this part of the study reflected quantitative research methodologies. Survey data allowed me to identify the independent variables most likely to influence positive attitudes toward attending college after graduation. I then used these variables to develop college-readiness modules to be used in class. Once I developed the college-themed, inquiry-based intervention, the worldview shifted to a pragmatic worldview and the need to improve student perception of their role in society as an educated citizen. The pragmatic lens allowed me to use both surveys and interviews to determine what works to improve student understanding about college-going options. Since I interviewed students who actively participated in the intervention, the language of this part of the study reflected qualitative methodologies. A pragmatic worldview accounts for the biases I brought to the study, which I note in the description of my roles in the study. Finally, the transformative worldview came into focus, as I worked with marginalized students. Marginalized students had the greatest potential to benefit from intervention, and, as a result, the transformative worldview holds that this project may

lead to social change and “confront social oppression” (Mertens, as cited in Creswell, 2014, p. 9).

As I began the literature review, I discovered A preliminary literature review revealed three areas where previous research could inform future research in college readiness. Studies in self-efficacy theory, education policy, and college readiness interventions provided useful information to shape this ROS. that social cognitive theory, policy, and additive programs influence how students perceive themselves as ready for college. A conceptual framework shows the relationships between investigated d concepts (Eisenhart, 1991). Figure 1 illustrates the relationship between theory, policy studies, college readiness intervention studies, and , policy and program effectiveness, intervention effectiveness, and the college ready student.

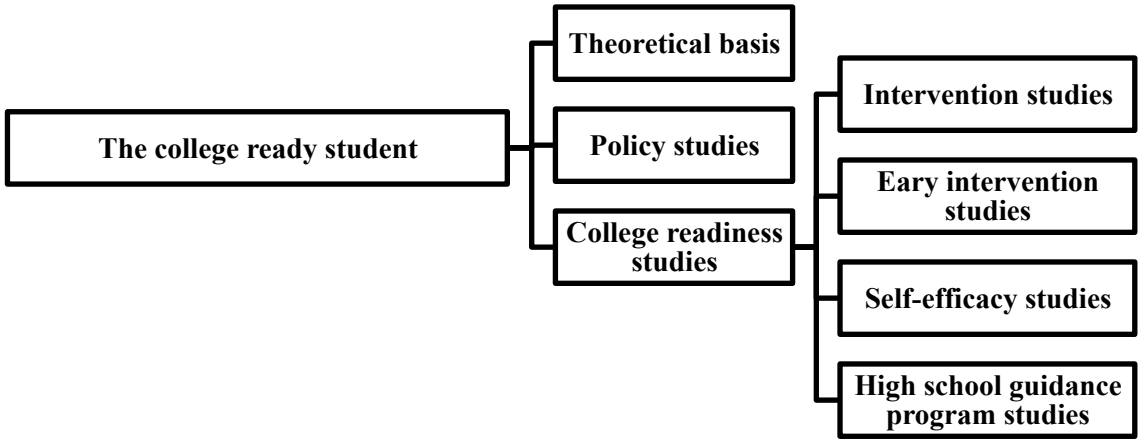


*Figure 1.* Concept map of influential factors in college readiness. This figure illustrates the relationship between theory, policy studies, college readiness studies, and the college ready student.

## Theoretical Basis

The high school student who plans to attend college after graduation faces many hurdles, and Perez-Felkner (2015) states one of those hurdles may, in fact, take root in the student's perception of college readiness. Applying Bandura's (1982) research in self-efficacy may lead to improved perceptions of college readiness. Therefore, Bandura's work provides an essential theoretical framework to breaking down barriers to college readiness.

In particular, Bandura questions "people's sense of personal efficacy to produce and regulate events in their lives" (p. 122). Understanding personal efficacy could

inform what role curricular intervention might play in the post-secondary education plan of students who do not understand what college readiness means. If a student receives instructional input about college readiness, how will this change the student's perception of readiness? This question deserves investigation.

College readiness means more than believing a student can achieve college readiness in high school. In fact, Bandura identifies sources of information to consider in researching this topic. Bandura describes these sources as enactive attainments based on personal success, vicarious experiences based on seeing others achieve success, verbal persuasion, and physiological state.

Bandura's self-efficacy theory (1977, 1982) provides the central theoretical/conceptual lens informing analyses and interpretation of results. Bandura proposed a theory of personal efficacy and its origins, mechanics, and effects (Zimmerman, 2000). Bandura's theory allows a deeper understanding about the barriers students face when considering post-secondary educational options. Bandura (1982) relates how well one does with a course of action with the ability not only to believe, but to develop and execute a plan, and to complete the action. Bandura's theory also indicates his distinction of self-efficacy as different from other self-motivational theories; he views self-efficacy as having a positive relationship to performance tasks. He also acknowledges that self-efficacy responds to changes in personal context and cultures. Bandura explains this can happen either personally or vicariously, through verbal input or physiological changes. Zimmerman, Bandura, and Martinez-Pons (1992) tested Bandura's theories on self-efficacy. These researchers found that students who

perceived efficacy were more likely to perform better academically. Conversely, research conducted by Lent, Brown, and Hackett (1994) discovered the opposite to be true: When students have a low self-efficacy, they avoid more challenging coursework, thereby making college attainment more difficult.

Building on Bandura's self-efficacy theory, work from David Conley (2007; 2010; 2012) provides foundational knowledge of college readiness. Conley (2012) delineates college readiness into four "key" areas: "cognitive strategies, content knowledge, transition knowledge and skills, and learning skills and techniques" (2). Having college knowledge, Conley (2010) argues, positively impacts a student's perception of college readiness. This knowledge bifurcates into academic and non-academic areas of readiness.

## Policy Studies

While college readiness represents a goal for districts, states, and national policy makers, inconsistencies exist in the policies designed to achieve this common goal. Blume and Zumeta (2013) state that low college readiness data stems from overall low college readiness policy efforts. The researchers looked at P-20 data, P-20 Council, Dual-enrollment, Advanced coursework, and statewide assessment data. Using Blume and Zumeta's hypothesis, unpreparedness stems from the lack of a statewide college readiness policy. However, Texas has a policy in place as referenced in *Closing the Gaps by 2015*. This policy calls for, among other interventions, "higher education intensive and bridging programs…that provide short-term academic instruction and support to high school juniors and seniors, recent high school graduates, first year

college students at risk of dropping out of college and adult GED recipients not ready for entry-level college courses" (The Texas Higher Education Coordinating Board, 2010, p. 7). Texas has traditionally supported college readiness efforts in middle and high schools.

## College Readiness Studies

### College-Going Self-Efficacy Studies

Applying Bandura's self-efficacy theory supports the hypothesis that schools can improve student understanding of college readiness by improving students' patterns of achieving success in college. Studying self-efficacy using Bandura's model (as cited in Gibbons & Borders, 2010), researchers determined that students who scored high on the College-Going Self-Efficacy Scale (CGSES) were likely to possess a belief in future college attendance. Gibbons (2005) developed the CGSES, a 30-question survey on perceptions of college success and self-persistence. According to the researchers, "Effective [college readiness] programs start in middle school" (p. 235). Gibbons' CGSES instrument was adapted for use in this research. Gibbons' work was referenced in Baker, Foxx, Akcan-Aydin, Williams, Ashraf & Martinez (2017).

Baker et al. (2017) identified four factors that may influence a student's perception of college readiness: procedural and financial challenges, positive personal characteristics, academic competence, and potential to achieve future goals. The researchers developed and tested a College and Career Readiness Self-Efficacy Inventory (CCRSI) based on a curricular intervention in a freshman high school ELA class. Modules were delivered by high school guidance counselors and focused on

setting goals for postsecondary education, developing study skills, acquiring attitudes of success, and gaining knowledge about college admissions, financial aid, and success in college. Support for classroom-based curricular intervention in Baker et al. came from research by Whiston, Tai, Rahardja, and Eder (2009). Research by Castellano, Richardson, Sundell, & Stone (2016) also supports the use of classroom-based curricular intervention.

In 2006 and 2007, the College Board used first-year performance data from incoming freshmen with self-reported student academic data from the SAT and ACT to develop a multidimensional college readiness index (Wiley, Wyatt, & Camara, 2010). Based on academic course taking and grades, student readiness can be expressed as Basic, Admissible, Standard, and Proficient (p. 9). While the study emphasized academic readiness predictors, the researchers pointed out "habits of mind" necessary for success in college. These non-academic traits include personality traits, financial resources, and coping skills (p. 23).

Holles (2016) builds on the ecological framework of Bronfenbrenner to catalog stories emerging from interviews with first year students at an elite technical college. In this study, the researcher was also the teacher. College readiness skills were stratified as individual (personal study habits), microsystem (school and peers), mesosystem (interactions between networks), exosystem (K-12 school system), macrosystem (global community) and chronosystem (evolving academic systems and job trends). According to Holles, as members of a microsystem, teachers can help students achieve success by understanding the complexity of student ecosystems.

## Intervention Programs

**Advancement via Individual Determination (AVID).** Intervention programs such as AVID may lead to improved perceptions of college readiness. AVID is an academic intervention program that encourages under-represented, under-achieving but highly capable students to take Advanced Placement courses with the goal helping students become college-ready (Shaughnessy, 2005; Watt, Johnston, Huerta, Mendiola, & Alkan, 2008). Llamas, Lopez, and Quirk (2014) conducted a mixed-methods study of 161 high school students enrolled in the AVID program. The study used a survey distributed to a small sample (n=161) measuring "internal and external resilience factors" (p. 206). According to this study on AVID effectiveness, a student's internal and external resilience may predict whether a student will be college-ready. The researchers also pointed out that positive environments, social connections, personal growth development, consistency, academic preparation, motivation, and teacher support potentially contribute to attitudes of college-readiness.

Additional research with AVID students focused on persistence in college. Watt, Butcher, and Ramirez (2013) studied the impact of AVID on college readiness. In their research, the authors examined the role of an AVID elective at the college level (called UNIV1301) in influencing college persistence. This quantitative study investigated the relationship between the grades of students co-enrolled in both a Math class and the AHE and students only enrolled in the math class. The researchers found that students who took an AVID support elective in college had higher grades in a co-enrolled math

class than students who did not take the AVID elective. However, the researchers could not prove a relationship between taking the AVID elective and further college success.

**Bridge programs.** *Bridge* programs support students as they transition from middle school to high school and high school to college. Dyce, Albold, and Long (2013) studied the effectiveness of summer *Bridge* programs on the perception of college readiness. Research was conducted using a questionnaire and demographic analysis. The researchers found that students who attended a weeklong summer program on college readiness had a greater understanding of the realities of college and increased confidence in the ability to attend college. More importantly however, the researchers discovered that a student who has an interest in attending college is more likely to talk to a trusted family friend or teacher rather than a total stranger, thus suggesting that people rather than programs influence college-going attitudes.

**Early Intervention**

Early monitoring and intervention can positively influence college readiness (ACT Inc., 2012). Intervention as early as middle school can influence perceptions of college success (Gibbons & Borders, 2010). Having early college plans increases the likelihood of following a college preparatory curriculum in high school and enrolling in college (Cabrera & LaNasa, 2001). Pre-college support programs may also influence perceptions of college readiness (Venezia & Jaeger, 2013). Research has been conducted with prospective first generation college students (Byrd &McDonald, 2005; Reid & Moore, 2008) and students in developmental classes (Koch, Slate, & Moore, 2010). While resources exist about the content of college preparation, little information exists to

show what happens to students designated by school personnel as "non-college-bound" (Amaro-Jiminez & Hungerford-Kresser, 2013, p. 3).

**Academic Factors**

Academic factors may influence a student's perception of college readiness. Moore, Slate, Edmonson, Combs, Bustamante, and Onwuegbuzie (2010) offer a compelling argument based on standardized test scores, and in this case, Texas Assessment of Knowledge and Skills (TAKS) data, claiming that Texas students, and particularly African American males, lack adequate preparation for college at the completion of high school. In a statistical analysis of Academic Excellence Indicator System (AEIS) data using SPSS, Moore et al. (2010) looked at the descriptive statistics behind TAKS scores in reading and math. The researchers found the lowest level of college readiness based on TAKS reading data was from African American students. African American students also had the lowest level of college readiness based on TAKS math scores. The "magnitude" (p. 830) of difference between White students and Hispanic and African American students has, as the authors suggest, "practical relevance to school policy and practice" (p. 830). Based on these findings, Texas high school graduates do not have the necessary preparation for postsecondary education. This is particularly true for underserved populations such as Hispanic and African American students.

Analyzing assessment scores (e.g. SAT, ACT, STAAR, TSI), as Maruyama (2012) argues, should be centered on "benchmarks with meaning and consequences" (p. 252). In Texas, the Texas Education Code (The Texas Higher Education Coordinating

Board, 2012) calls for all entering college students to be assessed for college readiness. According to this policy, students may satisfy the testing requirement by submitting satisfactory scores on SAT, ACT, or STAAR/EOC tests. In the absence of those scores, students must take the recently developed Texas Success Initiative (TSI) Assessment. Since THECB implemented this policy in 2012, there is not enough research to show whether this has lead to an increase in the number of students successfully completing the first-year of college. Because of this lack of data, attention, therefore, must focus on intervention programs implemented to improve the high school to college transition and ultimately improve college retention rates.

**High School-Based Guidance Programs**

The presence of a high school college counseling system promotes a college-going culture in high school (Gibbons, 2004; 2005). In an evaluation of high school-based college access centers known as GO Centers, Stillisano, Brown, Alford, and Waxman (2013) suggest that *enhanced* GO Centers, specifically, high school-based college information centers with aggressive outreach personnel and activities, more likely "inspire students' educational aspirations and lead to a sizeable increase in college enrollment, college-going, and college graduation rates" (p. 299). The GO Center evaluation by Stillisano et al. (2013) supports previous findings that demonstrate the effectiveness of the outreach center with a positive environment (Venezia & Kirst, 2005).

Supportive school environments can positively influence a student's college and career goals (McClafferty Jarsky, McDonough, & Nunez, 2009; Holland & Farmer-

Hinton, 2008). Unfortunately, as much as schools can provide a positive influence, far too many teachers and counselors lack the proper training to help students prepare for college (Oakes et al., 2006;Venezia & Kurst, 2005).

**Significance of the Literature Review**

A comprehensive literature review provided both philosophical and practical views on research in the field of college readiness. First, I was able to examine theories behind student motivation and perceptions of college readiness by looking at how belief in *self* may influence a student's goal of attending college. Conley's work validates the need for college readiness programs in high schools like the research site. This information gave me a theoretical basis for understanding a student's intrinsic motivation to attend college. Next, looking at recent practice studies allowed me to see a gap in practice at the research site. Specifically, recent practice studies showed me that without support programs like AVID or an Enhanced GO Center, the research site lacks an effective way of getting college knowledge to all students. Furthermore, I discovered several instruments that I could tailor for my research. Finally, qualitative data extracted from personal interviews allowed me to see the importance of the personal stories behind quantitative data.

Schools can no longer ignore marginalized populations who do not have a vision for post-secondary education and training. We know there is a clear link between developing a plan early in high school for college and career goals and academic success. Possible solutions, therefore, rely on doing what is best to support students and their college aspirations. We can provide opportunities for students to attend the College

and Career Center to listen to a counselor talk about college, or we can harness the relationship students have with teachers and use the classroom to provide a workspace to investigate college-going options.

**Most Significant Research and Practice Studies**

Table 2.1 is an alphabetical listing of literature most relevant to this study and the topic of college readiness and student perceptions of college readiness.

*Table 2*

*Most Significant Research and Practice Studies*

| |
|---|
| Amaro-Jimenez, C. & Hungerford-Kresser, H. (2013). Implementing an additive, college access and readiness program for Latina/o high school students in the U.S. *Current Issues in Education*, *16*(3), Retrieved from http://cie.asu.edu/ojs/index.php/cieatasu/article/viewFile/1135/509 |
| Baker, S.B., Parikh Foxx, S., Akcan-Aydin, P., Gavin Williams, R., Ashraf, A., & Martinez, R.R. (2017). Article 31: Psychometric properties of the career and college readiness self-efficacy inventory, *ACA Knowledge Center*, 1-13. |
| Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change, *Psychological Review, 84*, 191–215. |
| Boden, K. (2011). Perceived academic preparedness of first-generation Latino college students. *Journal of Hispanic Education*, *10*(2), 96–106. Retrieved from http://doi.org/10.1177/1538192711402211 |
| Castellano, M.E., Richardson, G.B., Sundell, K., & Stone, J.R. (2016). Preparing students for college and career in the United States: the Effects of career-themed programs of study on high school performance. *Vocations and Learning*, *10*, 47-70. doi:10.1007/s12186-016-9162-7. |
| Conley, D. T. (2007). *Redefining college readiness*, (3rd ed.). Eugene, OR: Educational Policy Improvement Center. |

Table 2 continued

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Perez-Felkner, L. (2015). Perceptions and resilience in underrepresented students' pathways to college. *Teachers College Record*, *117*(8). Retrieved from http://www.tcrecord.org/library/Issue.asp?volyear=2015&number=8&volume=11

Venezia, A., & Jaeger, L. (2013). Transitions from high school to college. *The Future of Children*, *23*(1), 117- 136

Conley, D. (2010). *College knowledge: Helping all students succeed beyond high school*. San Francisco: Jossey-Bass.

Dyce, C.M., Albold, C, & Long, D. (2013). Moving from college aspiration to attainment: Learning from one college access program. *The High School Journal*, *96*(2), 152-165. doi:10.1353/hsj.2013.0004

Foote, A., Schulkind, L., & Shapiro, T.M. (2014). The effect of ACT-college-readiness measures on post-secondary decisions. *Economics of Education Review*, *46*, 39-51.

Gibbons, M. M. (2005) College-going beliefs of prospective first-generation college students: Perceived barriers, social supports, self-efficacy, and outcome expectations. Directed by L. DiAnne Borders. The University of North Carolina at Greensboro. Retrieved from https://libres.uncg.edu/ir/uncg/f/umi-uncg-1049.pdf

Gibbons, M.M. and Borders L.D. (2010). A measure of college-going self-efficacy for middle school students. *Professional School Counseling*, *13*, 234-243.

Holles, C.E.P. (2016). Student Perceptions of preparedness for college: A case study of students in a first-year required course. *Curriculum and Teaching Dialogue*, *18*(1&2), 119-137.

Llamas, J. D., Lopez, S. A., & Quirk, M. (2014). Listening to students: Examining underlying mechanisms that contribute to the AVID program's effectiveness. *Journal of Education for Students Placed at Risk*, *19*(3-4), 196-214. doi: 10.1080/10824669.2014.967067

Martinez, R. R., Baker, S. B., & Young, T. (2017). Promoting career and college readiness, aspirations, and self-efficacy: Curriculum field test. *Career Development Quarterly*, *65*(2), 173-188. doi:10.1002/cdq.12090

Moore, G.W., Slate, J.R., Edmonson, S.L., Combs, J.P., Bustamante, R., and Onwuegbuzie, A.J. (2010). High school students and their lack of preparedness for college: A statewide study. *Education and Urban Society*, *42*(7), 817-838. doi: 10.1177/0013124510379619

Table 2 continued

Watt, K.M., Butcher, J., & Ramirez, E.F. (2013). Advancement Via Individual Determination (AVID) at a postsecondary institution: Support for first-generation college-goers. *Journal of Latinos and Education*, *12*(3), 202-214. doi: 10.1080/15348431.2013.765804

Watt, K.M., Johnston, D., Mendiola, I.D., Huerta, J., & Alkan, E. (2008). Retention of first-generation college-going seniors in the college preparatory program AVID. *American Secondary Education*, *36*(4), 17-40.

Wiley, A., Wyatt, J., and Camara, W. J. (2010). The development of a multidimensional college readiness index. The College Board Research Report 2010-3. Retrieved from http://research.collegeboard.org/publications/content/2012/05/development-multidimensional-college-readiness-index.

Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology, 25*, 82-91. doi: 10.1006/ceps.1999.1016.

# CHAPTER III

# METHODOLOGY

The purpose of this mixed methods study was to examine the effectiveness of a college-themed curricular intervention on students' perceptions of college readiness. The students in this study represent secondary aged students; however, when I first framed the problem at the research site, I saw inequity in students' access to information about college and careers. Specifically, I reasoned that those students failing high school courses and pursuing self-paced Credit Recovery modules were likely to be the ones left out of the college and career readiness discussions. I based my assumptions on previous teaching experience and my experience with the AVID (Advancement Via Individual Determination) program at other high school campuses.

My field-based mentor suggested working with the students in our CE9 – Freshman ELA class instead of Credit Recovery students. The CE9 ELA students had failed one or more STAAR tests in a previous year and were at-risk of not graduating from high school. My mentor felt we had the greatest potential to impact these students as these students still possessed time in their high school career to make good curricular choices. According to the classroom teacher and Dean of Instruction, these students received little support in addressing college readiness.

## Participants

Students enrolled in the study in conjunction with the research site's 2016-2017 CE9 Freshman English class. Twenty students (n=20) participated in the study as users of the intervention. One teacher facilitated instruction associated with the intervention.

This teacher was also an ELA teacher with three years of teaching experience. In addition to her teaching duties, she worked as an assistant women's soccer coach, both on campus and in the community. She stated a belief in her students' abilities to pursue college and believed herself to be a "champion" of these students (A. Penney, personal communication, February 2017). Students were told by the classroom teacher they could opt-out of the study, but none did. Prior to the intervention, I wished to determine students' prior knowledge about college (i.e., family experience with college). Therefore, the pre-intervention survey asked for information about students' family background and college attendance. I also wished to determine if participants received assistance through the federal free and reduced lunch program. Data about free and reduced lunch participation was collected for future research.

## My Role

I developed the college-themed, inquiry-based curricular intervention from analysis of students' responses to the pre-intervention survey. An existing college and career research pproject taught as part of the current English I curriculum at the research site provided the basis for the curricular intervention. After collecting data from the pre-intervention surveys, I revised the intervention to integrate (a) 21st-century career information from the Bureau of Labor Statistics, (b) information about colleges from The College Board, and (c) non-academic information such as the cost of college and available scholarships. After students completed the curricular intervention and post-intervention survey, the CE9 teacher asked for volunteers to participate in Exit

Interviews. I conducted one-on-one Exit Interviews one week following the post-intervention survey.

## Methods

### Rationale for Mixed Methods Study Design

A statement from Creswell (2013) influenced the choice of research methodology in this Record of Study: "Postpositivists do not believe in a strict cause and effect, but rather recognize that all cause and effect is a probability that may or may not occur" (pp. 23-24). What Creswell calls a "belief system" (p. 24) relates to the field of college readiness because college readiness is not one class and one result. Rather, the college-ready student comes from a variety of internal (e.g., mindset/motivation) and external (e.g., family, socioeconomic) variables that must be accounted for in any valid research study. Therefore, I believe a mixed methods approach was necessary because neither qualitative nor quantitative alone would yield sufficient data to discover topics and patterns in college readiness.

I wished to know the stories behind students' college-going aspirations, so I integrated case study methodology to accompany qualitative and quantitative research. In terms of Creswell (2013), such an "instrumental case study" would illustrate one student's experience with college readiness (p. 99). In particular, I believed "one bounded case" would add a level of richness to a larger body of research on college readiness (p.99). Additionally, there is validity in what Erickson (as cited in Stake, 2010, p. 172) calls *vignettes*. Stake adds, "a qualitative vignette does not need to indicate how common the happening is, although the researcher may take steps to find its typicality"

(p. 172). Student vignettes could provide "poignant" information on college access patterns to use in the record of study (p. 172).

I determined that I needed information at three stages to assess the effectiveness of the curricular intervention in preparing students to be college ready. Before the intervention, I needed quantitative information from participants to inform the design of a college-themed, inquiry-based intervention. After the intervention, I needed quantitative information about how the course changed student attitudes toward preparing for college. Also after the intervention, I needed quantitative information about how likely a student was to develop and follow through on college-going plans. Post intervention interviews allowed students to explain themselves and capture the narrative of college-going aspirations.

All students enrolled in CE-9 Freshman English were eligible to participate in the study. Therefore I used nonprobabilistic sampling. Due to the small sample size (n=20) and complete student enrollment in Phases 1 and 2 of the study, I did not stratify the sample (Creswell & Plano Clark, 2011).

**Data Collection and Sources of Evidence**

This mixed methods project addressed students' lack of understanding and experiences about college readiness. I used an embedded research design based on quantitative data from a student survey on students' attitudes toward college and college readiness. Recent studies by Holles (2016) and Baker et al. (2017) validated the use of college and career readiness self-efficacy inventories. I, therefore, modified the College-Going Self-Efficacy Scale (CGSES) survey used by Gibbons (2005) to match the goals

of this study. I removed several questions from the Gibbons and Borders instrument as these questions addressed academic factors and my study centered on non-academic factors. In addition, some survey questions were similar to ones posed in recent research by Martinez, Baker, & Young (2017) and Baker et al. (2017). Gibbons' original survey instrument appears as Appendix A.

The final survey consisted of 25 items scored on a four-point Likert scale. The four potential responses included; "Not sure at all" = 1 to "Somewhat sure" = 2, "Sure" = 3, and "Very sure" = 4. Students also indicated their gender, their year in school, their relationship to a college-going family member, and their free or reduced lunch status. At the time, I was not sure if I wanted to use economic status based on qualification for free or reduced lunch as a variable in the study. By the time I decided not to use this information, the pre-intervention surveys had already been distributed. I used results from pre-intervention to revise the curricular intervention. My goal was to include curricular modules that would engage students based on their specific areas of interest. The pre-intervention survey is included as Appendix B. A synopsis of the curricular intervention follows as an artifact in Appendix C.

Information gleaned from pre-intervention surveys influenced revision of the curricular intervention to address areas where students indicated they wanted more information. The revised intervention allowed students to investigate their career interests, research colleges, and examine general degree programs. The intervention also guided students to research the cost of college and potential financial aid sources. After curricular intervention, the classroom teacher collected quantitative data using a Likert-

style questionnaire on likeliness to attend college based upon participation in the intervention. The 25 survey statements remained the same as pre-intervention survey, but this time instructions asked, “Now that you have completed a college inquiry unit, how likely are you to do the following NOW?” As in pre-intervention surveys, students chose responses ranging from “Not sure at all” = 1 to Somewhat sure = 2, Sure = 3, and Very sure = 4. The post-intervention survey instrument follows as Appendix D.

I also collected qualitative data using structured interviews after intervention to provide participant perspective on individual college-readiness stories. Six of the 20 students volunteered to participate in the one-on-one interviews. The list of interview questions is included as Appendix E.

I collected data using pre- and post-intervention methodology to test the effectiveness of college-themed curricular intervention. Following recommendation from my ROS co-chair Dr. Laub, I used both quantitative and qualitative data in an embedded mixed methods research design (Creswell & Plano-Clark, 2011). This before and after measurement meant using a paired t-test for data analysis (Salkind, 2014).

Figure 2 illustrates the progression of how I used data collected from CE9 students at the research site to (1) inform the development of a college-readiness intervention to be piloted within freshman CE-9 English classes and (2) provide evidence of the intervention’s effectiveness in changing student attitudes toward college readiness.

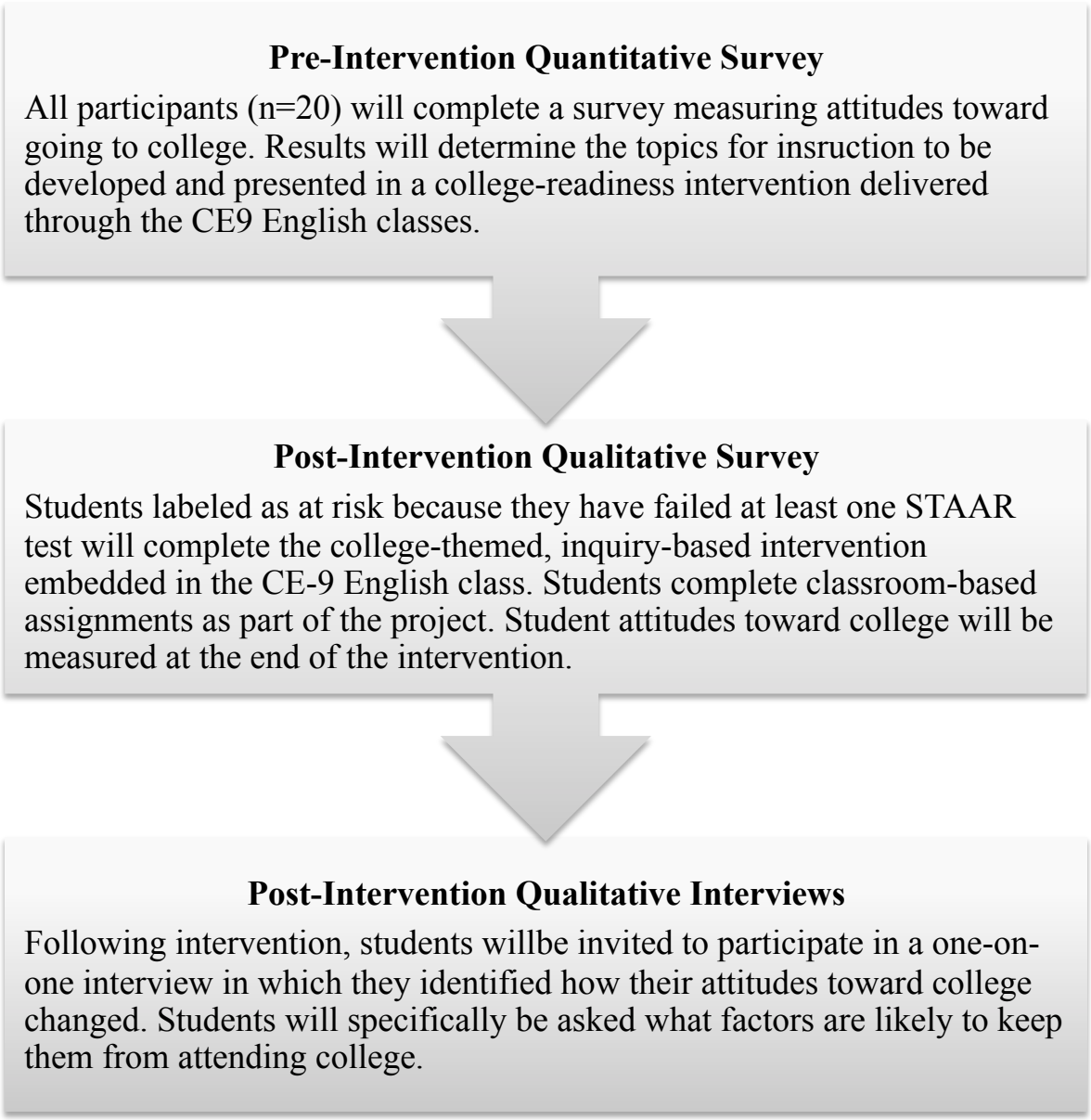


*Figure 2.* Pre- and post-intervention research design. This figure shows progression of questioning through the research design.

## Final Proposed Solution

My final proposed solution integrated results from a pre-intervention survey of CE9 ELA students to revise an existing college-themed, inquiry-based intervention for use in the CE9 ELA I class. The intervention guided students to locate information about both the academic and non-academic preparation necessary to be college ready. In addition to student survey responses, my prior research in college readiness helped identify additional aspects of preparation for college. To address research needs, I developed a college-themed, inquiry-based curricular intervention for implementation within the freshman English Language Arts curriculum. The intervention consisted of six different instructional modules on how to research colleges and careers, how to write a resume, how to discover the costs of college and how to write college admission essays. I also developed a script for the teacher to use during implementation on the modules. After the study, students assembled a research-based inquiry portfolio for summative assessment. The classroom teacher served as a "college mentor" during the intervention.

## Research Timeline

Although I received approval for the intervention in September 2016, the school principal and dean of instruction asked to have CE9 students complete the curricular intervention after the statewide STAAR test administration in late March 2017. Conducting the intervention part of the study in April and May allowed students to focus on the curricular intervention without the stressful distraction of a looming high-stakes STAAR test. Table 3 reflects the research timeline I followed.

*Table 3*

*Intervention Timeline for the Study*

| Date | Action | Validation |
|---|---|---|
| 8/18/16 | Began initial discussions with school principal and dean of instruction | Drafted initial proposal and received approval from school for study |
| 9/6/16 | IRB approval | IRB approval e-mail |
| 2/1/17 | Began working with CE9 teacher on curricular intervention | Revised curricular intervention |
| 4/3/17 | Administered pre-intervention surveys | Pre-intervention surveys distributed by CE9 teacher and hard copies were returned the next day |
| 4/10/17 | Intervention updated and revised to address student responses to pre-intervention survey | Curricular intervention delivered to teacher for student use |
| 5/1/17 | Students completed curricular intervention and completed post-intervention surveys | Post-intervention surveys distributed by CE9 teacher and hard copies were returned to me the next day |
| 5/8/17 | Students were given the option to participate in one-on-one post-intervention interviews | Interview schedule created |
| 5/15/17 | Post-intervention interviews completed | Recorded notes from interview, created spreadsheet of responses, then coded and analyzed data |

## Data Analysis

This record of study utilized a mixed methods design. Students received a participant number from the classroom teacher to use on all survey responses. Labeling in this manner allowed coordination of participant pre- and post-intervention responses while retaining student confidentiality. Analyzing survey results from pre-intervention surveys identified possible topics of student interest that were then incorporated into the curricular intervention. After intervention, qualitative and quantitative data were recorded by respondent number to create a before and after determination of perceptions of college readiness. Mean scores and standard deviation were calculated. Data were then analyzed for skewness and kurtosis.

Descriptive statistics helped identify data trends and provide a general understanding the role of curricular intervention in a student's perception of college readiness. To determine the impact of curricular intervention, a paired t-test was applied to pre- and post-intervention survey results. A paired t-test was the best statistical analysis tool because it enabled me to find the relationship between a variable (curricular intervention) and one population.

Conducting personal interviews after the intervention allowed observation of personal views and circumstances (Stake, 2010). The classroom teacher asked for volunteers. Six of the 20 study participants volunteered. Students received an identifying letter to avoid confusing qualitative responses with quantitative student data. I conducted the interviews. Before the interview, each participant received assurance of his or her anonymity. I collected notes by student letter, not name. I took notes after each interview

and recorded key phrases from each respondent during the interview. I used a standard list of questions for each participant. Immediately following each interview, I created an Excel spreadsheet of student comments. After completing the interviews, I coded results by thought statements. Similar statements were grouped into larger categories, and trends were identified. I looked for what Creswell (2014) calls saturation, the point where further analysis does not reveal new information.

**Validity and Reliability Approaches**

I identified *expectation bias* or the *Pygmalion effect* as a potential threat to internal validity because I developed the curricular intervention used in the study. I accounted for this by triangulating quantitative research data with qualitative data and member-checking results. I also reviewed quantitative and qualitative data with the dean of instruction.

For pre- and post-intervention surveys, respondents used a paper-and-pencil instrument with multiple choice, Likert-style responses on the adapted College Going Self-Efficacy Pre- and Post-Intervention Survey. Both pre- and post-intervention surveys were untimed and anonymous. Students received a survey number from the teacher according to the class roster to maintain confidentiality and consistency. I designed procedures for data collection and analysis to reduce threats to internal and external validity. All CE9 ELA students took the pre-and post-intervention survey by choice. To reduce bias, the participating teacher distributed all surveys in all phases of research. Following intervention, participants were invited, but not required, to participate in a follow-up interview. Of the 20 study participants, six participants volunteered to

participate in one-on-one interviews. I conducted exit interviews by following an established script and taking notes during the interview that I summarized immediately afterward.

According to Stake (2010), "no observations and interpretations are perfectly repeatable" (p. 454). Therefore, member-checking established reliability. I verified inferences made from data analysis by going back to the classroom teacher to review pre-and post-intervention results. I confirmed student interview responses by providing a summary of interview notes for each interview participant. Additionally, I discussed survey results, emerging trends, and implications for the future with the school principal and dean of instruction.

**Ethical Considerations (IRB)**

I reviewed AERA's Code of Ethics and identified a potential ethical concern about the conduct of my project, which I mitigated by revising how I participated in the college-readiness course. Section 14(02) states that education researchers select research participants with whom they have no other relationship. To avoid this conflict, my mentor designated the classroom teacher as the person to administer pre- and post-intervention surveys. Students voluntarily participated in the college-themed, inquiry-based project. I only interacted with students when I interviewed them about their college plans after they completed the intervention. As recommended by Creswell (2013), I used standard procedures to collect data. In particular, I used standard interview questions during post-intervention one-on-one interviews and took notes immediately after each interview before proceeding to the next interview.

A formal review of the methods for collecting information from human subjects determined that the methods proposed for this study did not meet the federal definition of "human subjects research with generalizable results." As the proposed information gathering methods were within the general scope of activities and responsibilities associated with my current position, I was not required to seek human subjects approval. A copy of the email communication from ROS co-chair Dr. Laub regarding the IRB's decision about the study is included as Appendix F.

## Limitations

Several limitations emerged throughout the study:

- Not all students completed the entire curricular intervention; therefore some students had information gaps. Had the curriculum been delivered through computer-based modules or in a self-paced manner, there might have been a greater likelihood of completion of the intervention.
- Curricular intervention was the only variable I analyzed, even though I collected student self-reported data about knowledge of a college-going family member and free or reduced lunch status. A student's perception of college readiness is the product of many different variables, and this record of study only looked at the significance of classroom-based curricular intervention.
- Confusion about going to college affects more than just at-risk students. While all Freshman ELA students at the research site completed the curricular intervention, the study only included students enrolled in a CE9 ELA course. It would benefit the field of college readiness to look at how curricular intervention

impacts students who already have a college-going mindset and compare data across an entire student grade-level population, not just a sample.

# CHAPTER IV

## RESEARCH RESULTS

This Record of Study (ROS) examined the relationship between a college-themed, inquiry-based intervention administered in a CE9 high school Freshman ELA class and students' attitudes toward college readiness. This study encompasses three parts. The first part of the study used quantitative data to guide revision of a college readiness curriculum currently in use by Freshman ELA teachers at the research site. The second part of the study incorporated survey response data to measure the change in students' attitudes toward college readiness following an intervention. The final part of the study relied on individual student stories of college readiness captured through one-on-one interviews to provide narratives and triangulate data.

In this study, the following research questions were addressed in this order:

- To what extent can a student's beliefs about his or her readiness for college be improved so that the student understands his or her college-going trajectory?
- To what extent does completion of a college-themed, inquiry-based classroom intervention change a student's perception of college readiness?

This chapter begins with a discussion on areas where pre-intervention survey data indicated students in the study desired more information about college. For example, results from descriptive analyses highlighted the impact of the curricular intervention on students' perceptions of college readiness among the students identified as at-risk. In addition, results from causal analysis isolated the impact of curricular

intervention on students' perceptions of college readiness. Finally, interpretation of six students' narratives illustrated the extent to which a college-themed, inquiry-based intervention promotes students' college knowledge and the impact of this new knowledge on students' perceptions of college readiness.

## Sample

The research sample consisted of twenty students enrolled in two CE9 Freshman ELA classes. According to the school database, all students were freshmen in terms of completed education credits. One student self-identified as a sophomore according to age. Half of the students (10) were female and half (10) were male. Twelve of the students had at least one family member who attended college, although only five had a family member who graduated from college. Participant data is presented in Table 4.

*Table 4*

*Study Participants*

| Demographic item | Yes | No | Prefer not to answer | Unsure |
|---|---|---|---|---|
| Did student have a family member who attended college? | 12 | 8 | 0 | 0 |
| Did student have a family member who graduated from college? | 5 | 14 | 0 | 1 |
| Do you receive free or reduced lunch assistance? | 8 | 8 | 2 | 2 |

## Pre-Intervention Research Findings

The pre-intervention survey measured students' attendance perception, answered as "I can" statements. The first column in Table 5 contains the item number for college attendance perception in the pre-intervention survey instrument. The second column provides the item queries. The third, fourth, fifth, and sixth columns contain descriptive statistics (i.e., mean, standard deviation, skewness, and kurtosis) for students' responses to the attendance perception items. The third column (Mean) is the mean of all student responses for each question. Mean scores are listed in the column from lowest to highest. A low score indicates lack of confidence in attendance perception, whereas a high score indicates confidence. Students had the lowest (m=1.90) mean score for Q8 ("I can pay for college even if my family cannot help me). Student mean scores were highest (m=3.35) in Q2 ("I can have family support for going to college"). Standard deviation for pre-intervention responses ranged from 0.81 to 1.23. Skewness ranged from -1.42 to 0.68. Kurtosis values fell within an expected range (-1.00 to 0.47) except for Q2 which asked, "I can have family support for going to college." The kurtosis value for this question was 2.38. Results from Table 5 inform discussion in Chapter V.

*Table 5*

*Pre-Intervention Attendance Data Used to Revise Intervention*

| Attendance Scale<br>How sure are you about being able to do the following: | | Mean | SD | Skew | Kurt |
|---|---|---|---|---|---|
| Q8 | I can pay for college even if my family cannot help me | 1.90 | 0.91 | 0.68 | -0.35 |
| Q4 | I can get a scholarship or grant for college | 2.15 | 1.09 | 0.49 | -1.00 |
| Q1 | I can make an educational plan that will prepare me for college | 2.50 | 1.00 | -0.18 | -0.92 |
| Q5 | I can find a way to pay for college | 2.60 | 0.88 | -0.59 | -0.19 |
| Q10 | I can get good grades in my high school science classes | 2.75 | 0.97 | -0.22 | -0.82 |
| Q11 | I can choose the high school classes needed to get into a good college | 2.80 | 0.95 | -0.78 | 0.04 |
| Q7 | I can choose college courses that best fit my interests | 2.80 | 0.89 | -0.55 | -0.05 |
| Q3 | I can choose a good college | 2.85 | 0.93 | -0.54 | -0.28 |
| Q12 | I can go to college after high school | 2.95 | 1.23 | -1.20 | 0.47 |
| Q9 | I can get good grades in my high school math classes | 3.00 | 1.12 | -0.74 | -0.82 |
| Q6 | I can make my family proud with my choices after high school | 3.10 | 0.97 | -0.99 | 0.34 |
| Q2 | I can have family support for going to college | 3.35 | 0.81 | -1.42 | 2.38 |

*Note: SD – Standard Deviation; Skew – Skewness; Kurt – Kurtosis*

The pre-intervention survey also measured students' attitudes toward college persistence, expressed as "I could" statements. The first column in Table 6 contains the item number for persistence perception in the College-Going Self Efficacy survey instrument. The second column provides the item queries. The third, fourth, fifth, and sixth columns contain descriptive statistics (i.e., mean, standard deviation, skewness, and kurtosis) for students' responses to the attendance perception items. The third column (Mean) is the mean of all student responses for each question. Mean scores are listed from lowest value to highest value. A low mean score indicates lack of confidence in college persistence, whereas a high mean score indicates confidence in college persistence. Students had the lowest mean score (m=2.10) for Q13 ("I could pay for each year of college). Student mean scores were highest (m=3.05) in Q21 ("I can get a good job after I graduate from college). Standard deviation ranged from 0.88 to 1.21. Kurtosis values ranged as expected (-0.99 to 1.35) for all questions. Results listed in Table 6 inform discussion in the following chapter.

*Table 6*

*Pre-Intervention Persistence Data Used to Revise Intervention*

| Persistence Scale<br>How sure are you about being able to do the following: | | Mean | SD | Skew | Kurt |
|---|---|---|---|---|---|
| Q13 | I could pay for each year of college | 2.10 | 0.97 | 0.56 | -0.45 |
| Q14 | I could get As and Bs in college | 2.35 | 0.88 | -0.27 | -0.78 |
| Q23 | I can make an educational plan that will I could be smart enough to finish college | 2.50 | 0.95 | -0.41 | -0.72 |
| Q19 | I could care for my family responsibilities while in college | 2.55 | 1.05 | -0.15 | -1.07 |
| Q24 | I could pick the right things to study at college | 2.60 | 1.05 | -0.29 | -0.99 |
| Q17 | I could get good enough grades to get or keep a scholarship | 2.60 | 0.88 | -0.08 | 0.47 |
| Q16 | I could take care of myself in college | 2.75 | 1.21 | -0.86 | -0.13 |
| Q25 | I could do the classwork and homework assignments in college classes | 2.75 | 1.07 | -0.59 | -0.76 |
| Q18 | I could finish college and receive a college degree | 2.75 | 0.91 | -0.38 | -0.37 |
| Q22 | I would like being in college | 2.80 | 1.06 | -0.45 | -0.89 |
| Q20 | I could get the education I need for my choice of career | 2.85 | 0.93 | -0.54 | -0.28 |
| Q15 | I could get my family to support my wish of finishing college | 2.90 | 1.12 | -1.29 | 1.35 |
| Q21 | I could get a job after I graduate from college | 3.05 | 1.00 | -0.81 | -0.24 |

*Note: SD – Standard deviation; Skew – Skewness; Kurt – Kurtosis*

## Post-Intervention Research Findings

Based on the results of analysis on students' responses to the pre-intervention survey, the edited curricular intervention included student tasks related to finding out about college costs and how to find financial aid and scholarships. The classroom teacher included discussions about scholarships and the Free Application for Federal Student Aid (FAFSA) in class. Following completion of the curricular intervention, students completed a post-intervention survey about college-going attendance perceptions ("I can" statements) and college-going persistence ("I could" statements). While queries on the post-intervention survey remained the same to queries on the pre-intervention survey, instructions differed by adding the word NOW to the end of the post-intervention instructions. Students' responses to the post-intervention survey were analyzed both by item and by student.

### Question-by-Question Analysis

A question-by-question analysis isolated differences between pre- and post-intervention perceptions of college attendance and college persistence. These differences are noted in Table 7. Column 1 lists questions in the order they appeared on both pre-intervention and post-intervention surveys. The second column reflects pre-intervention mean score by question. Column three reflects the post-intervention mean score for each query. The fourth column indicates the difference between the pre-intervention score and the post-intervention score. Negative values indicated by a negative sign in front of the number in column six reflect decrease in total score from pre-intervention to post-intervention. Values in column four increased the most (0.35) in Q1 ("I can make an

educational plan that will prepare me for college") and Q7 ("I can choose college courses that best fit my interests"). Values in column four decreased the most (-0.30) in Q17 ("I could get good enough grades to get or keep a scholarship"). Table 7 presents pre- and post-interention mean score for each question in the survey.

*Table 7*

*Pre- and Post-Intervention Question by Question Response Data*

| | Pre-intervention | Post-intervention | |
|---|---|---|---|
| Question | Mean | Mean | Difference in mean |
| Q1 | 2.50 | 2.85 | 0.35 |
| Q2 | 3.35 | 3.30 | -0.05 |
| Q3 | 2.85 | 3.15 | 0.30 |
| Q4 | 2.15 | 2.35 | 0.20 |
| Q5 | 2.60 | 2.65 | 0.05 |
| Q6 | 3.10 | 3.10 | 0.00 |
| Q7 | 2.80 | 3.15 | 0.35 |
| Q8 | 1.90 | 1.95 | 0.05 |
| Q9 | 3.00 | 3.00 | 0.00 |
| Q10 | 2.75 | 2.70 | -0.05 |
| Q11 | 2.80 | 2.85 | 0.05 |
| Q12 | 2.95 | 2.90 | -0.05 |
| Q13 | 2.10 | 2.15 | 0.05 |

Table 7 continued

| Question | Pre-intervention Mean | Post-intervention Mean | Difference in mean |
|---|---|---|---|
| Q15 | 2.90 | 3.10 | 0.20 |
| Q16 | 2.75 | 3.00 | 0.25 |
| Q17 | 2.60 | 2.30 | -0.30 |
| Q18 | 2.75 | 2.85 | 0.10 |
| Q19 | 2.55 | 2.60 | 0.05 |
| Q20 | 2.85 | 3.00 | 0.15 |
| Q21 | 3.05 | 3.10 | 0.05 |
| Q22 | 2.80 | 2.90 | 0.10 |
| Q23 | 2.50 | 2.75 | 0.25 |
| Q24 | 2.60 | 2.80 | 0.20 |
| Q25 | 2.75 | 2.85 | 0.10 |

**Student Pre- and Post-Intervention Analysis**

Ten out of the 20 students experienced a gain in pre- and post-intervention scores. Of those 10 students, two students each experienced a 25-point gain in pre- and post-intervention survey scores. Eight of the 20 students experienced a decrease in pre- and post-intervention survey scores. Of those 8, one student experienced a 16-point decrease. Two students did not experience a change in pre- and post-intervention survey scores.

Since the same group of students completed pre- and post-intervention surveys, a paired t-test determined whether a statistically significant difference between pre-and post-intervention responses existed. The p-value equaled 0.47 with 19 degrees of freedom. Calculations of mean showed no difference in pre- and post-intervention values. Table 8 indicates descriptive mean, standard deviation, skewness, and kurtosis for pre- and post-intervention surveys.

*Table 8*

*Values for Pre- and Post-Intervention Descriptive Statistics*

| Analysis method | Pre-intervention | Post-intervention |
|---|---|---|
| Mean | 2.75 | 2.85 |
| SD | 0.32 | 0.34 |
| Skew | -0.60 | -0.32 |
| Kurt | -0.74 | 0.98 |

*Note: Skew – Skewness; Kurt – Kurtosis; Df – Degrees of freedom*

## Post-Intervention Qualitative Research Findings

Qualitative research methods allow researchers to "catch" stories from participants (Brown, 2010, p. 133). Single case studies, however, may fail to yield generalizable results (Creswell, 2013). Therefore, post-intervention qualitative research included interpretation of six students' interviews. These students agreed to participate in post-intervention, one-on-one interviews. Summaries from the interviews generated the following narratives:

Student A exhibited very little prior knowledge about college. Student A explained she lacked family members who attended college, and the student stated she had not thought about college before this intervention. The cost of college surprised this student, and the student talked about the idea of starting at a community college. The student commented at the end of the interview, "I have a better understanding now of what needs to be done in high school."

Student B professed some family members had attended college and already possessed some college exposure based on playing competitive golf. Student B stated he aspired to play college golf but was surprised at how few golf scholarships are awarded. Student B learned that college is going to be hard, "but I'd still like to try."

Student C discussed the influence of her aunt, a college graduate, as a college-going role model. Student C completed a career-themed 7th-grade that she liked, and Student C felt like this project gave her a better understanding of college readiness. Student C said she wanted to pursue education to become an eye doctor or a profession

related to optometry. Student C resolved to set a goal of making good grades in high school.

Student D described the influence of a college-going role model. Her dad, a nurse, inspired her to do well enough in school to be able to attend college. Student D commented on the significance of the curricular intervention, “This project got me thinking about adulthood. I know I am just a freshman, and I thought it was too early to think about college. But I learned so much to help me make good choices in high school.”

Student E expressed the desire to attend college because his family has talked about it. Student E stated he wanted to be a college wrestler because he liked college sports. Student E admitted to “not being the greatest student.” Even though Student E acknowledged the cost of college surprised him, he was “not discouraged.” In fact, Student E said he wanted to do more research about colleges and careers. He now wants to stay out of trouble in high school so he can graduate.

Student F stated she started thinking about college in the 8th-grade but did not get serious about college readiness until the intervention. Student F likes forensic science and may pursue the criminal justice field. Student E admitted the intervention got her thinking about her study skills and the need to “pay attention in science.”

Qualitative data analysis included breaking student interview responses down to thought segments, recording frequency of thought statements, and identifying trends in the statements. Based on interview data, a total of111 thought statements emerged in five broad categories: motivation, college knowledge, academic concerns, non-academic

concerns, and persistence. I further identified sub-categories. Under the motivation category, students mentioned their discouragement, ambition, and perseverance. In the category of knowledge, students discussed having a college-going background and prior knowledge of college from other sources. Students expressed academic concerns and financial concerns. Finally, students discussed persistence in sub-categories including having goals, new goals, and new college knowledge. Figure 3 presents the five categories and ten sub-categories identified from the thought statements and arranged in order of emergence.

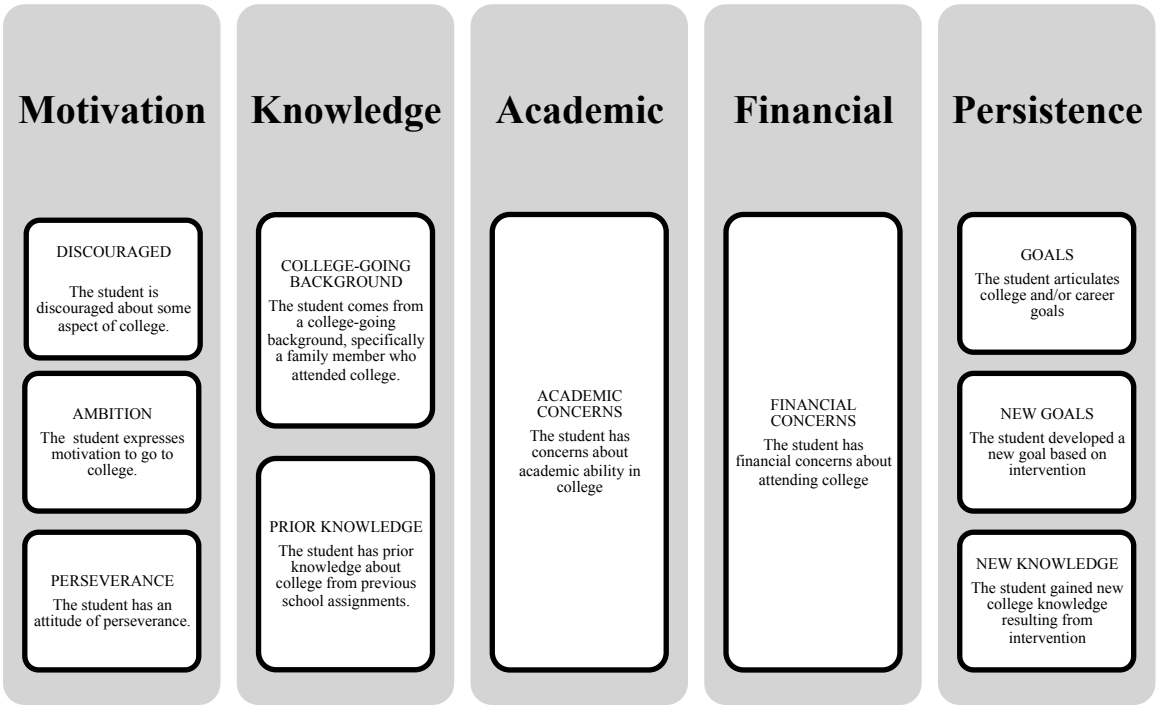


*Figure 3.* Categories and sub-categories of interview comments. Student interview data consisted of thought segments that told specific stories of perceptions of college readiness.

As patterns and trends emerged in the interviews, similar comments were noted and tallied as thought segments. Students most frequently mentioned, "has new knowledge about college" in the knowledge sub-category. Next, students mentioned their college-going motivation ("is motivated to go to college") in the ambition sub-category. Similar values were recorded in sub-category academic concerns ("has academic concerns") and sub-category financial concerns ("has attendance/financial

concerns") categories. Similar values were also recorded in sub-category perseverance ("has an attitude of perseverance" and sub-category prior knowledge ("has prior knowledge from school assignment"). Lowest total values occurred in sub-category "is discouraged from attending college").

Personal interviews served two purposes. First, information from post-intervention personal interviews yielded information not previously seen in post-intervention quantitative data. Students most frequently mentioned having new knowledge about college and ambition to attend college. Next, students expressed academic concerns and financial concerns as potential barriers to college. Only one student expressed discouragement toward attending college. Second, qualitative interviews yielded results similar to quantitative data gathered from the post-intervention survey. Therefore, qualitative interview data triangulated post-intervention quantitative results.

## Summary

A college-themed, inquiry-based project has been part of the freshman ELA curriculum at the research site for several years. This project provides first-year high school students with an opportunity to conduct meaningful research while investigating post-secondary education and training options. Use of the college-themed, inquiry-based project became a vehicle to observe and study student college readiness perceptions among at-risk students in a pre- and post-intervention methodology.

Quantitative data from pre-intervention surveys indicated students wanted to know more about planning and paying for college. Data collected from pre-intervention

surveys informed modifications to the curricular intervention. After intervention, while quantitative data from post-intervention surveys did not yield a significant change in student perceptions of college readiness in the sample as a whole, other notable trends emerged. Some students experienced a decrease in total scores from pre- to post-intervention assessment. However, other students experienced a significant increase in pre- and post-intervention total scores.

Qualitative data from post-intervention, one-on-one interviews generated meaningful narratives of student college-going aspirations. Students had similarities in thought segments, especially in planning for college and selecting courses, aspects of college readiness addressed by the curricular intervention. Students frequently having the motivation to succeed in high school in college, having college knowledge, and having the ability to succeed in both academic and non-academic aspects of college life.

# CHAPTER V

# SUMMARY AND CONCLUSIONS

This chapter summarizes the record of study (ROS) with a focus on the approach to research, research questions, and methodology. In addition, this chapter further explains key research findings, implications for high school classrooms, and recommendations for practice.

## Summary

Business, education, and government leaders frequently use the term college readiness in speeches, policies, and programs. Leaders agree that to thrive in a global economy, America needs a base of college-educated workers. However, a literature review suggests many students lack the necessary academic and non-academic preparation for college. Although programs exist to promote college readiness, at-risk students need access to accurate information to improve their perceptions of college readiness. This mixed methods study examined the effectiveness of a college-themed, inquiry-based curricular intervention administered to an at-risk Freshman ELA class in changing perceptions of college readiness. I looked specifically at three research questions in this order:

- To what extent can a student's beliefs about his or her readiness for college be improved so that the student understands his or her college-going trajectory?
- To what extent does completion of a college-themed, inquiry-based classroom intervention change a student's perception of college readiness?

A mixed methods approach served three purposes. First, the study isolated topics to cover in a curricular intervention. Second, the study determined the effectiveness of curricular intervention in changing perceptions of college readiness among at-risk students. Third, the study extracted specific student experiences regarding perceptions of college readiness. In addition to advice from Texas A&M University faculty, a consultation of *Focus: A Technical Brief* (2005) ensured the soundness of the study. I paid close attention to study design, methods, and procedures, and I based my research on "the clear chains of inferential reasoning" emerging from the literature review (p. 2).

The study began with an examination of the factors potentially preventing high school students from pursuing postsecondary education and training. These factors were incorporated into the curricular intervention. Next, 20 at-risk students completed the curricular intervention as part of their Freshman ELA class. These students provided the necessary information for answering the research questions guiding the ROS. In addition, students' perceptions of readiness were assessed after an intervention. Finally, students were given the opportunity to share experiences in one-on-one interviews.

## Research Findings

This record of study reveals that curricular interventions can affect perceptions of college readiness among at-risk students and encourage students to learn more about their post-secondary education and training options. New knowledge from the intervention could inspire students to develop realistic plans for college attendance.

Prior to curricular intervention, students felt most comfortable ($\overline{x}$=3.35) with family support ("I can make my family proud with my choices after high school" and "I

can have family support for going to college"). In contrast, students identified the ability to pay for college ($\overline{x}$=1.9) as a factor that would most prohibit their college-going attendance ("I can pay for college even if my family cannot help me"). Comparing kurtosis values for all other questions, the value for Q2 ("I can have family support for going to college") exceeded the range of the other questions. As for persistence in college, students again questioned their ability to pay for college ($\overline{x}$=2.1). Students felt most optimistic about their ability to get a job after graduating from college ($\overline{x}$=3.05). Students most frequently ($\overline{x}$= 1.90) identified the ability to get financial support for college (Q8 "I can get a scholarship or grant for college") as an attendance barrier compared to Q2 "I can have family support for going to college ($\overline{x}$= 3.35). Calculating total scores by question and then calculating mean, skewness, and kurtosis values resulted in a prioritized curricular focus: students saw the ability to pay for college and make a plan for college as potential barriers to their college readiness. Pre-intervention survey results informed revision of the curricular intervention to include information about financial aid and scholarships.

Post-intervention data indicate that following curricular intervention, student attendance perception improved the most in planning for college (Q1 "I can make an educational plan"), choosing college classes (Q7 "I can choose college courses that best fit my interests), and choosing a college (Q3 "I can choose a good college"). Student attendance perceptions worsened in getting good grades while in college (Q17 "I could get good enough grades to get or keep a scholarship"). Mean scores decreased 0.05 in a pre-and post-intervention analysis of actualizing a plan to go to college (Q12 "I can go to

college after high school"). Looking at the sample as a whole, there was a slight variance in mean in a pre-and post-intervention analysis.

However, looking at the data from an individual student perspective, twelve of the participants had improved total post-intervention scores, and of those 10, two student scores increased by 25 points. One student experienced a 16-point decrease. While SD and Skew remained mostly unchanged in a before and after analysis, kurtosis shifted from negative (before) to positive (after).

Personal interviews conducted after the intervention revealed certain factors shape students' perceptions of college readiness, including the presence of college role models, the ability to pay for college, and the ability to complete college-level work. Persistence factors such as ambition, persistence, and college knowledge indicated that students' perception of readiness could play a role in helping students see themselves as college-ready.

Data from this study suggest that college-themed, curricular interventions motivate struggling students toward a graduation goal. A college-themed, inquiry-based curricular intervention, as part of a freshman ELA class, can improve perceptions of college readiness by encouraging students to create a plan for post-secondary education. While not all students had positive responses to the intervention, after the intervention, most students indicated an increased likelihood to plan for secondary and post-secondary education and training. More students having a secondary and post-secondary education plan are an important result of this study because having a plan for college meets state and federal goals.

Results of this study align with other research studies on the positive of effect of college-themed curricular interventions (Castellano, Richardson, Sundell, & Stone, 2016; Gibbons & Borders, 2005; Baker et al., 2017).

## Implications

The results of this study suggest that high schools can help at-risk students improve perceptions of college readiness by using college-themed lessons implemented in the classroom. Having accurate college knowledge improves students' perception of college readiness. A greater understanding of what it means to be college ready could result in more students enrolling in postsecondary education. Passive attempts at presenting college information (college fairs, web sites) will have little impact on students who do not see themselves as college ready. Opportunities to encourage college readiness can begin in the classroom, facilitated by a college-themed curricular intervention lead by a college role model, the classroom teacher. Resources can be as general as navigating web sites from The College Board or College for all Texans or as specific as a curricular unit of inquiry, as presented in this study. High schools should provide meaningful classroom-based college-themed instructional opportunities for all students to learn about their post-secondary educational options as a way to build college knowledge.

## Areas for Future Research

College readiness will continue as an area of social, economic, and cultural importance. This record of study suggests that using college-themed, inquiry-based curricular interventions may produce outcomes on student perceptions of college

readiness. Future research could implement case-study methodology to identify other factors that could influence perceptions of college readiness. Future research could also identify the cause of students' doubts about their college readiness while still in high school.

A longitudinal study could show the impact of a system of college-readiness lessons in high school. Beginning in a student's first year in high school, schools should provide college-themed lessons each year of high school. Tracking student perceptions of readiness each year of high school could yield significant data about the factors that encourage college readiness.

In short, college readiness is more than a web site or a class. College readiness is the product of local, state, and national policies, programs, and interventions. College readiness is a coordinated system of bringing information about college to students in a way that will encourage them to develop and execute college-going goals. This record of study serves as a small snapshot of the overall college readiness picture.

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APPENDIX A

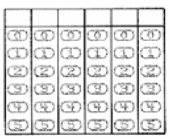
Original survey instrument (Gibbons 2005).

**College-Going Outcome Expectations Scale**

Please read each of the following statements and answer them as honestly as possible. Fill in the bubble that best describes how sure you feel about each question. There are no right or wrong answers. Be sure to answer every question. Be sure to read each statement carefully.

**If I go to college, I believe:**

| | Definitely Believe | Believe | Somewhat Believe | Don't Believe At All |
|---|---|---|---|---|
| 1. I will be able to pay for college | ○ | ○ | ○ | ○ |
| 2. I will impress my family | ○ | ○ | ○ | ○ |
| 3. It will be hard for me to pass my classes | ○ | ○ | ○ | ○ |
| 4. I will have better opportunities in life | ○ | ○ | ○ | ○ |
| 5. I will have the same friends as I do now | ○ | ○ | ○ | ○ |
| 6. I will contribute more to society as a result of going to college | ○ | ○ | ○ | ○ |
| 7. I will not be able to take care of myself | ○ | ○ | ○ | ○ |
| 8. My friends might not like me anymore | ○ | ○ | ○ | ○ |
| 9. I will feel different from my family | ○ | ○ | ○ | ○ |
| 10. I will feel confused in my classes | ○ | ○ | ○ | ○ |
| 11. I will make new friends | ○ | ○ | ○ | ○ |
| 12. I will make other people's lives better because of my college experiences | ○ | ○ | ○ | ○ |
| 13. I will not have enough money for things like clothes, movies, and other activities | ○ | ○ | ○ | ○ |
| 14. I will gain respect from others | ○ | ○ | ○ | ○ |
| **If I go to college, I believe:** | | | | |
| 5. I will be proud of myself | ○ | ○ | ○ | ○ |
| 6. I will be prepared academically | ○ | ○ | ○ | ○ |
| 7. My parents will support my decision | ○ | ○ | ○ | ○ |
| 8. My family might not understand my choice to attend college | ○ | ○ | ○ | ○ |
| 9. I will be successful in college | ○ | ○ | ○ | ○ |
| 0. My friends would be jealous of me | ○ | ○ | ○ | ○ |
| 1. I will feel different from my friends | ○ | ○ | ○ | ○ |
| 2. My parents will approve of me | ○ | ○ | ○ | ○ |
| 3. My other responsibilities will make it hard for me to do well in school | ○ | ○ | ○ | ○ |
| 4. I will not fit in with my friends at home | ○ | ○ | ○ | ○ |
| 5. My family will not approve of me | ○ | ○ | ○ | ○ |
| 6. My friends will be happy for me | ○ | ○ | ○ | ○ |
| 7. I will make a lot of money after I graduate | ○ | ○ | ○ | ○ |
| 8. I will be stressed out a lot | ○ | ○ | ○ | ○ |



# APPENDIX B

## Pre-intervention survey instrument

For the purpose of this survey, "college" is considered any public or private post-secondary institution, including technical school, community college, or a 4-year college/university.

**College-Going Self-Efficacy Scale**
Gibbons (2005)

| ***Attendance Scale*** **How sure are you about being able to do the following:** | **Not at all sure** | **Somewhat sure** | **Sure** | **Very sure** |
|---|---|---|---|---|
| I can make an educational plan that will prepare me for college | | | | |
| I can have family support for going to college | | | | |
| I can choose a good college | | | | |
| I can get a scholarship or grant for college | | | | |
| I can find a way to pay for college | | | | |
| I can make my family proud with my choices after high school | | | | |
| I can choose college courses that best fit my interests | | | | |
| I can pay for college even if my family cannot help me | | | | |
| I can get good grades in my high school math classes | | | | |
| I can get good grades in my high school science classes | | | | |
| I can choose the high school classes needed to get into a good college | | | | |
| I can go to college after high school | | | | |
| ***Persistence Scale*** **If you do go to college, how sure are you about being able to do the following:** | **Not at all sure** | **Somewhat sure** | **Sure** | **Very sure** |
| I could pay for each year of college | | | | |
| I could get A's and B's in college | | | | |
| I could get my family to support my wish of finishing college | | | | |
| I could take care of myself in college | | | | |
| I could get good enough grades to get or keep a scholarship | | | | |
| I could finish college and receive a college degree | | | | |
| I could care for my family responsibilities while in college | | | | |
| I could get the education I need for my choice of career | | | | |
| I could get a job after I graduate from college | | | | |
| I would like being in college | | | | |
| I could be smart enough to finish college | | | | |
| I could pick the right things to study at college | | | | |
| I could do the classwork and homework assignments in college classes | | | | |

Gibbons, Melinda M. (2005). "College-going beliefs of prospective first-generation college students: Perceived barriers, social supports, self-efficacy, and outcome expectations". Directed by L. DiAnne Borders. *The University of North Carolina at Greensboro*. Retrieved from http://libres.uncg.edu/ir/uncg/f/umi-uncg-1049.pdf

For the purpose of this survey, "college" is considered any public or private post-secondary institution, including technical school, community college, or a 4-year college/university.

**Please provide the following information about you**

Are you:

- ☐ Male?
- ☐ Female?

Current standing in school (credits):

- ☐ Freshman
- ☐ Sophomore
- ☐ Junior
- ☐ Senior

Has anyone in your immediate family (mother, father, brother, sister) attended college?

- ☐ Yes (if so, indicate relationship to you)

  _____

  _____

  _____

- ☐ No

Has anyone in your immediate family (mother, father, brother, sister) graduated from college?

- ☐ Yes (if so, indicate relationship to you)

  _____

  _____

  _____

- ☐ No

Do you qualify for free or reduced lunch at school?

- ☐ Yes
- ☐ No
- ☐ Unsure
- ☐ Prefer not to answer

*For research use only*

# APPENDIX C

## College-Themed, Inquiry-Based Curricular Intervention

### English I College-Themed Inquiry Unit

**Objective** – As part of your English I class, you will have the opportunity to investigate your college and career options after high school. Your research objective is to develop a plan for education or training after high school. You will find out what is required to enroll in college, what kind of courses you will be taking in college, and what career you can pursue with your degree. You may choose to research a 4 year school, a community college, a trade school, or a branch of the military.

### Inquiry Modules

1 **College and Career Research –** Every day, your teacher will present short mini-lessons on specific aspects of education and training after high school. After daily mini-lessons, collect notes in your notebook on colleges, careers, and classes. Use these notes to think about what you might like to do after high school.

2 **Résumé** – Using the format you learned in class, write a résumé. This is very helpful when you are filling out scholarship applications or asking someone to write a letter of recommendation for you. Be sure to include all information – even if you don't think it is important. Resumes follow a specific style – follow directions and be sure to look at the samples your teacher gave you.

3 **Texas Common Application** – Look at the online version of the Apply Texas application. Think about what the application wants to know about you as a potential college student.

4 **Costs – Housing, Tuition and Fees** – In conjunction with your Algebra class, create a comparison cost chart for the college you have researched. For this assignment, assume you are living and eating your meals on campus. This information must be in the form of a table. Organize the information so that it is easy to read and understand, and prepare a budget for a year of college expenses. Be specific, and be sure to tell me what the price includes. How much is annual tuition? Compare your school data with a local community college (based on living at home).

5 **Scholarships/Financial aid** – Using the Naviance web site, look at the various available scholarships and select one scholarship that matches your skills and/or interests. Print out the information sheet for your notes.

6 **Admissions Essay** – Discuss what an admissions essay might be able to say about you. Then write your college admissions essay for the Apply Texas Application. Use this prompt from the 2016 Apply Texas Application:

| |
|---|
| What was the environment in which you were raised? Describe your family, home, neighborhood, or community, and explain how it has shaped you as a person. |

7 **Closing Remarks** – What did you learn from this project? Write a short reflection in your notes about the most important lessons from this inquiry project.

APPENDIX D

Post-intervention survey instrument

# College Knowledge Survey

Based on the *College-Going Self Efficacy Scale* (Gibbons 2005)

**Directions: Now that you have completed inquiry-based modules on college and career options after high school, please indicate how likely you are now to do the following:**

| ***Attendance Scale*** **How sure are you about being able to do the following:** | **Not at all sure** | **Somewhat sure** | **Sure** | **Very sure** |
|---|---|---|---|---|
| I can make an educational plan that will prepare me for college | | | | |
| I can have family support for going to college | | | | |
| I can choose a good college | | | | |
| I can get a scholarship or grant for college | | | | |
| I can find a way to pay for college | | | | |
| I can make my family proud with my choices after high school | | | | |
| I can choose college courses that best fit my interests | | | | |
| I can pay for college even if my family cannot help me | | | | |
| I can get good grades in my high school math classes | | | | |
| I can get good grades in my high school science classes | | | | |
| I can choose the high school classes needed to get into a good college | | | | |
| I can go to college after high school | | | | |
| ***Persistence Scale*** **If you do go to college, how sure are you about being able to do the following:** | **Not at all sure** | **Somewhat sure** | **Sure** | **Very sure** |
| I could pay for each year of college | | | | |
| I could get A's and B's in college | | | | |
| I could get my family to support my wish of finishing college | | | | |
| I could take care of myself in college | | | | |
| I could get good enough grades to get or keep a scholarship | | | | |
| I could finish college and receive a college degree | | | | |
| I could care for my family responsibilities while in college | | | | |
| I could get the education I need for my choice of career | | | | |
| I could get a job after I graduate from college | | | | |
| I would like being in college | | | | |
| I could be smart enough to finish college | | | | |
| I could pick the right things to study at college | | | | |
| I could do the classwork and homework assignments in college classes | | | | |

For the purpose of this survey, "college" is considered any public or private post-secondary institution, including technical school, community college, or a 4-year college/university.

**Please provide the following information about you**

Did you complete the College Research Portfolio assignment?

- ☐ Yes
- ☐ No
- ☐ Partially

Are you:

- ☐ Male?
- ☐ Female?

Current standing in school (credits):

- ☐ Freshman
- ☐ Sophomore
- ☐ Junior
- ☐ Senior

Would you be willing to participate in a short follow-up interview about your perceptions of college readiness?

- ☐ Yes

  If yes, please tell your teacher to schedule an interview time during your ELA class period
- ☐ No

Gibbons, Melinda M. (2005). "College-going beliefs of prospective first-generation college students: Perceived barriers, social supports, self-efficacy, and outcome expectations". Directed by L. DiAnne Borders. *The University of North Carolina at Greensboro*. Retrieved from http://libres.uncg.edu/ir/uncg/f/umi-uncg-1049.pdf

*For research use only*

For the purpose of this survey, "college" is considered any public or private post-secondary institution, including technical school, community college, or a 4-year college/university.

# APPENDIX E

Post-Intervention One-on-One Interview Questions

What was your prior knowledge about college – before you started the college modules?

What do you think about going to college now?

Is there anyone in your family or a close friend who has shared his or her college experience with you?

Why would you want to go to college?

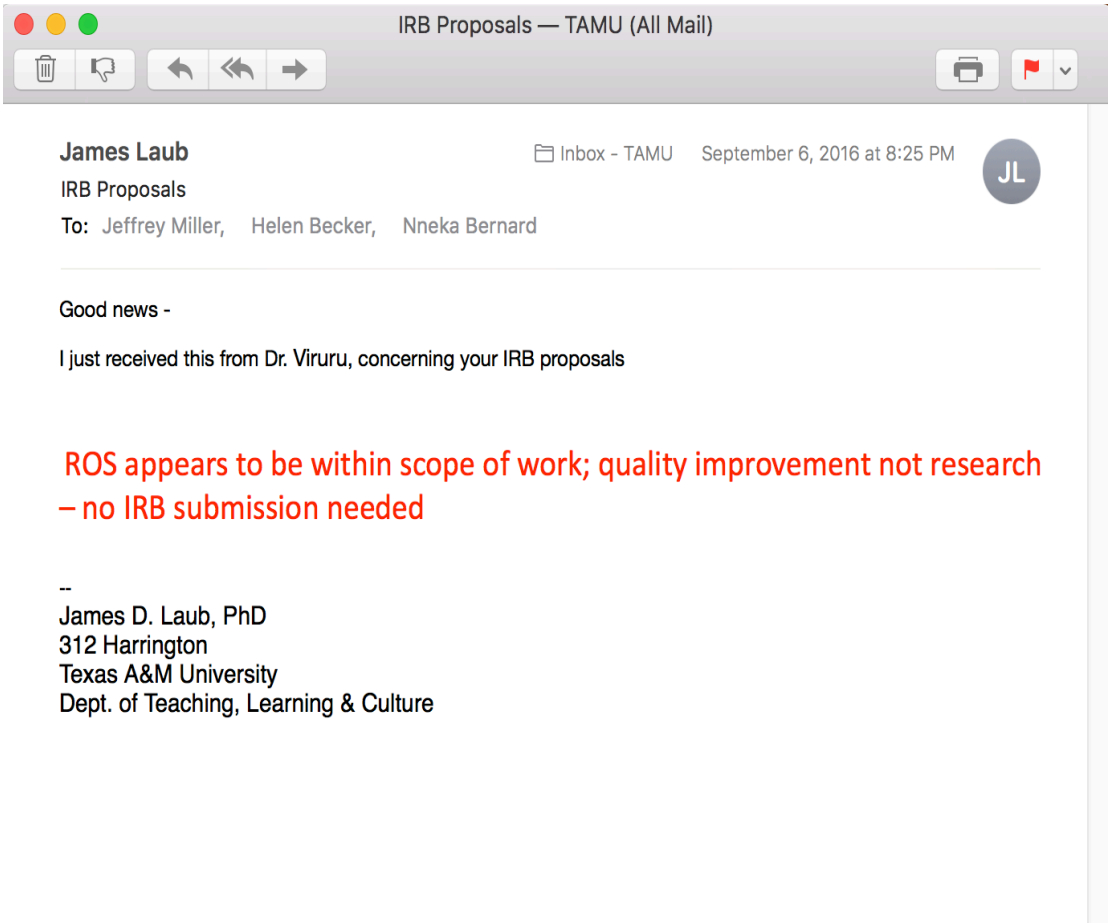
Did talking about college in the Unit of Inquiry change what you thought about going to college?

What information was most helpful to you in this college-themed unit of inquiry?

How likely are you to go to college now?

APPENDIX F

IRB approval e-mail from Dr. Laub


IRB Proposals — TAMU (All Mail)

**James Laub** Inbox - TAMU September 6, 2016 at 8:25 PM

IRB Proposals

To: Jeffrey Miller, Helen Becker, Nneka Bernard

Good news -

I just received this from Dr. Viruru, concerning your IRB proposals

ROS appears to be within scope of work; quality improvement not research – no IRB submission needed

--
James D. Laub, PhD
312 Harrington
Texas A&M University
Dept. of Teaching, Learning & Culture